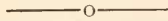


miles north of Lusk, Wyoming, during July, 1895, and in part by myself, in the same locality, during August of the same year. The flies were found running about in swarms on the sunny surface of small pools which were rapidly drying up in the bed of Little Lightning Creek. Their habits resemble those of *Hydrophorus*, with species of which they were found associated. They were very agile and not easily captured.



A NEW EMPID WITH REMARKABLE MIDDLE TARSI.

By WILLIAM MORTON WHEELER, Ph.D.

Rhamphomyia scaurissima nov. sp.

Male (Fig. 1).—Black. Face very broad for a male, with a few bristles along either orbit. Antennæ velvety black; first and second joints with rather stout hairs; first joint short and cylindrical; second joint spherical; third joint cylindrical, gradually tapering to a bluntly rounded tip, on which the short style is inserted. Palpi slender, black, with prominent black hairs. Proboscis as long as the head, yellowish at the tip, labella fuscous, hairy; bristles of the front and hairs of the posterior and inferior orbits prominent, black. Thorax opaque, dusted with gray, especially on the pleuræ and just in front of the scutellum; bristles prominent, confined almost exclusively

to the dorsal and humeral regions; scutellum dusted with gray and beset with several black hairs. Abdomen usually more shining than the thorax, and covered with shorter black hairs; hypopygium large, porrect and gaping, fringed with long black or brownish hairs, which are usually directed backwards; central filament long and whip-like, almost completely disengaged. Legs black, in some specimens more piceous, hairy; tips of coxæ frequently yellowish; first joint of fore tarsi perceptibly in-



Fig. 1.—*Rhamphomyia scaurissima* ♂.

crassated; middle tibia shortened and thickened, with very long and conspicuous hairs; joints of the middle tarsi (Fig. 3) curiously modified as follows: First joint consisting of two parts, a globular base articulating

with the tibia, and a large scale-like appendage attached to the outer surface of the globular base. This scale-like appendage is concave on its inner and convex on its outer surface and overlaps the second joint. The globular base is beset with prominent hairs radiating out in all directions; the hairs on the scale-like appendage are shorter and stouter. The second joint, which articulates with the globular base of the first joint, is large and cylindrical and sends out from its proximal end a long posteriorly directed club-shaped appendage, clothed with a pencil of long hairs. The hairs on the shorter limb of the joint are smaller and more or less recurved on the anterior face. The third joint is enormously enlarged transversely to form a boat-shaped structure. Its hairs are limited to certain portions of its surface. The fourth and fifth joints are comparatively small, the former being perceptibly swollen, the latter resembling



Fig. 2.—*Rhamphomyia securissima* ♀.

wings 4 mm.

Female (Fig. 2).—Face somewhat broader than that of the male. Thorax with a thicker layer of gray dust and shorter bristles. Legs plain, with much shorter hairs. Wings with somewhat paler veins and with the discal cell greatly enlarged, so that the gently sinuous cross-vein which forms its outer boundary lies near the posterior margin. This cross-vein does not send out a vein to the margin as in the male. Length of body 3.5 mm.; length of wings 3.75 mm.

This species was described from ten male and six female specimens kindly loaned me by Mr. A. W. Snow. They were collected at Palo Alto, Cal., March 30, 1895.

The species is an unusually striking one on account of the re-

the corresponding joint of the fore and hind tarsi. Hind legs plain, except for the fringe of long hairs on the tibiae, especially on their posterior surfaces. Wings rather long and narrow, grayish hyaline, with brown veins; costa near its middle with a prominent black thickening, just beneath which is a long and narrow brown stigma; second vein with a small thickening just before its junction with the third vein; discal cell of medium size; halteres fuscous, capitulum somewhat darker. Length of body 3.5 mm.; length of

markable development of the secondary sexual characters, especially in the male. The peculiar modifications of the *fore* tarsi in the males of many Dolichopodidæ are well known, and Mr. Snow has given a good account of the singular *hind* tarsi of *Platipeza calceata* Snow and *P. ornatipes* Towns.,* but no Dipteron known to me has such peculiar *middle* tarsi as the *Rhamphomyia* just described. In the case of the Dolichopodidæ it is certain from the observations of Dahl† and Aldrich‡ that the ornamental tarsi are vibrated before the females during a kind of courtship. It has been inferred that these ornaments very probably answer the same purpose as the remarkable plumes of many male birds, *e. g.* the ocellate feathers of the peacock, Argus pheasant, etc. As *Rhamphomyia scaurissima* probably flies in swarms with a peculiar dancing movement like other species of the genus, we may suppose that at such times the unusual tarsi of the males would be dangled conspicuously and thus attract the attention and stimulate the appetency of the inornate females.

In the female of *Rh. scaurissima* the great enlargement of the discal cell must be regarded as a secondary sexual character,

since the moderate discal cell of the male is almost certainly of a more generalized and conservative nature.

Most species of *Rhamphomyia* retain this conservative type of discal cell in both sexes, but a certain number of species present the peculiar enlargement in the female. It occurs in the European *Rh. spissirostris* Fall., *Rh. nigripes* Fab. and *Rh. serpentata* Loew, and

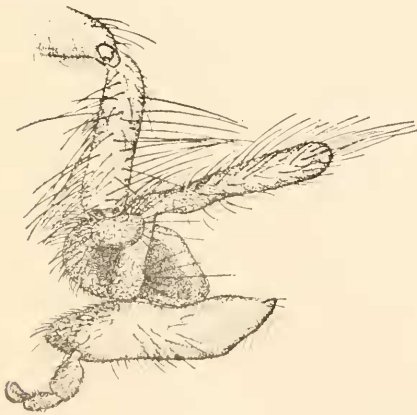


Fig. 3.—Right middle foot of *Rh. scaurissima* ♂ seen from the inside.

among the North American species in Loew's *Rh. limbata*, *litu-*

* American Platipezidæ, Kans. Univ. Quart. vol. iii, No. 2, 1894, pp. 143-152.

† Die Insekten koennen Formen unterscheiden. Zool. Anzeiger 12 Jahrg. 1889, pp. 243-247.

‡ Courtship among the Flies, Am. Naturalist, vol. xxviii, 1894, pp. 35-37.

rata and *irregularis*. I have also observed it in three undescribed species from Wisconsin, Kansas and Colorado respectively. *Rh. scaurissima*, however, differs from all of these excepting some specimens of the Colorado species in lacking the vein which runs from the posterior cross-vein to the margin. This is all the more remarkable because the male has this vein well developed.

OBITUARY.

JULIUS FLOHR, Coleopterist, died on February 8th, last, at Vera Cruz, Mexico. He was born in Hamburg, Germany, on Feb. 11, 1837, and went to Mexico in 1859.

AUGUSTE SALLE.—On the fifth of May, in Paris, there died a man whose loss will be sincerely regretted by every American entomologist who had visited that city. Speaking our language fairly well, he was always ready to devote his time in assisting those in need of an interpreter. As an entomologist of no small capacity, and with a large personal acquaintance among entomologists, he has proven of immense assistance to all who had the pleasure of his acquaintance. It is to be regretted that lack of time, owing to the demands of the press, prevent me in giving an extended notice of his services.—G. H. HORN.

ANDREW S. FULLER, widely known as a writer on subjects related to agriculture and horticulture, died suddenly of heart failure on Monday, May 4th, at his home in Ridgewood, N. J., in the sixty-eighth year of his age. Mr. Fuller was agricultural editor of the New York *Weekly Sun* for more than a quarter of a century, and at different times he had been connected with *The Rural New Yorker*, *The Tribune*, *The Agriculturist* and *American Gardening*. He was the author of several popular books on arboriculture, small fruit culture and the propagation of plants, and he had recently completed a treatise on nut-culture, which he considered his most important work. He was an authority in some branches of entomology, an enthusiastic student and experimenter in his chosen field, and was absorbed in his favorite occupations until the very hour of his death.